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10/720,961	11/24/2003	Cary Lee Bates	ROC920030211US1	5209

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ART UNIT	PAPER NUMBER
2192	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/720,961	BATES ET AL.
	Examiner	Art Unit
	Zheng Wei	2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _01 May 2007_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1,3-8,10-13 and 15-18_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1,3-8,10-13 and 15-18_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _24 November 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All   b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Remarks

1.   In view of the Appeal Brief filed on 05/01/2007, PROSECUTION IS

HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of

the following two options:

  (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a

    reply under 37 CFR 1.113 (if this Office action is final); or,

  (2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31

    followed by an appeal brief under 37 CFR 41.37. The previously paid

    notice of appeal fee and appeal brief fee can be applied to the new

    appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have

    been increased since they were previously paid, then appellant must

    pay the difference between the increased fees and the amount

    previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening

prosecution by signing below:

2.   Claims 1, 3-8, 10-13 and 15-18 remain pending and have been examined.

Response to Arguments

3.   Applicant's arguments filed on 05/01/2007, in particular on pages 7-16,

have been fully considered.

- At page 7, second paragraph, Applicant contends that Claim 1 is not

  anticipated by Miller, because Miller does not disclose key limitations,

  specifically automatically maintaining status of source code statements

  and using the status to identify copies for propagating changes. The

  Examiner respectfully disagrees with the Applicant. First of all, as

  Applicant admitted the term "status" at page 9, second paragraph "The

  Word 'status' standing alone and without context, could mean many

  things. But in the context of the claim, it is only used to identify a 'copy'".

  Therefore, the "status" can be reasonable interpreted as "line", high-

  light/different color of lines or other tag/mark. Miller discloses a line

  status (marks) to identify the selections (copies)(p.166, section 7.3.4

  "Scrollbar Augmentation", "To help the user keep track of multiple

  selections in a long document, the browser pane's scroll-bar is

  augmented with marks indicating where selections (copies) are located

  (figure 7.6)" and also see example figure 9.6, 9.7, 9,8 and 9.9). It also

  should noted that the claim language "automatically determining

  whether one or more copies of said first source code statement exist

  within said source code file form said status of each respective source

  code statement" does not mean that "automatically determining" is

  based on "said status". Secondly, at page 10, second paragraph, the

  Applicant argues that the pattern matching is not automated, because

  Miller requires manual input. However, the claim limitation is only

  "automatically determining". The Examiner's position is that "manual

input" and "automatically determining" are two separate processes.

"automatically determining" can be performed no matter what input

method is used. Therefore, "automatically determining" based on

"manual input" still teaches claim limitation.

- At page 12, second paragraph, the Applicant argues that Miller does not

  disclose the key claim limitations, specifically automatically maintaining

  status of source code and using the status to identify unverified source

  code statements. Because the applicant points out that Miller does not

  explicitly disclose the pattern verification is source code verification

  (p.13, last paragraph, "The pattern could be anything; there is no

  explicit mention of source code verification (although a form of source

  code is mentioned earlier in the paper) and Miller does not check syntax

  of source code (p.14, second paragraph), does not provide automatic

  warning action (p.14, third paragraph) and it is inconceivable to using

  pattern matching technique for source code verification (p.15, first

  paragraph). The Examiner respectfully disagrees with that. Regarding

  to claim 7, there is no limitation about source code verification relating

  to source code compiler/compilation. Further more the claim limitation

  "code file being compilable into objection code" does not mean source

  code has been previous compiled. Therefore source code verification

  can be interpreted as anything performing checking/verification, e.g.

  checking words or data matching certain pattern as Miller disclosed.

- At page 16, the Applicant contends that claim 13 is not obvious in view
  of Miller. However, based on the discussion above, the computer
  program product version of claimed method is obvious over Miller,
  because it is well know in the computer art to practice and/or produce
  such a program product for carrying out the acts/steps of such method
  by a computer.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35
U.S.C. 102 that form the basis for the rejections under this section made
in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in
public use or on sale in this country, more than one year prior to the date of application for patent in
the United States.

5.   Claims 1, 3-8 and 10-12 are rejected under 35 U.S.C. 102(b) as being
anticipated by <u>Miller</u> (Robert C. Miller, Lightweight Structure in Text, May
2002).

Claim 1:

<u>Miller</u> discloses a method for developing source code for a computer
program, comprising the steps of:

- generating a plurality of source code statements in a source code file,
  said source code file being compilable into object code of said

computer program (see for example, p.228, figure 9.6, browser pane and related text, "java code");

- automatically maintaining a record of status of each respective source code statement (p.166, section 7.3.4 "Scrollbar Augmentation", "To help the user keep track of multiple selections in a long document, the browser pane's scroll-bar is augmented with marks indicating where selections (copies) are located (figure 7.6)" and also see example figure 9.6, 9.7, 9,8 and 9.9 and related text)

- editing a first source code statement of said plurality of source code statements to produce an edited first source code statement (see for example, p.226, section 9.1.2, Simultaneous Editing Mode, Figure9.4, dialog pane and "start editing" button and related text);

- automatically determining whether one or more copies of said first source code statement exist within said source code file from said status of each respective source code statement, each of said first source code statement and copy of said first source code statement occupying a different respective location within said source code file and being compliable together into said object code of said computer program (see for example, p.226, section 9.1.2, Simultaneous Editing Mode, lines 19-21, "Now, when the user makes a selection in one record, the system automatically infers exactly one selection in every other record") ; and

- responsive to said automatically determining step, automatically

  propagating changes made by said editing step to said one or more

  copies of said first source code statement (see for example,

  p.228.figure 9.6 and figure 9.7 and related text, "deletes this

  selection").

Claim 3:

Miller discloses the method for developing source code for a computer

program of claim 1, wherein said automatically propagating step

comprises:

- automatically displaying said changes made by said editing step to at

  least one said copy of said first source code statement (see for

  example, p.226, section 9.1.2, Simultaneous Editing Mode, lines 19-

  21, "Now, when the user makes a selection in one record, the system

  automatically infers exactly one selection in every other record"); and

- soliciting user confirmation of said changes (see for example, p.228,

  figure 9.6, buttons "go" and "clear").

Claim 4:

Miller further discloses the method for developing source code for a

computer program of claim 1, wherein said status of each respective

source code statement comprises data indicating whether the respective

source code statement has been verified (see for example, Chapter 10,

Outlier Finding, p.256, section 10.3, Unusual Matches Display, lines 5-6,

"In simultaneous editing, outlier finding is used behind the scenes to direct

the user's attention to possible error.", also see p.257, figure 10.4 and

related text).

Claim 5:

Miller also discloses the method for developing source code for a

computer program of claim 4, wherein said data indicating whether a

respective source code statement has been verified indicates whether the

respective statement has been verified (match/mismatch) as part of a

compilation process for compiling source code into object code executable

by a computer system (see for example, p.258, lines 13-16, "When

mismatches are displayed, the user can search for both kinds of bugs in a

pattern: false negatives as well as false positives.")

Claim 6:

Miller further discloses the method for developing source code for a

computer program of claim 1, further comprising the steps of:

- receiving a user command to copy a second of said plurality of source

  code statements to a different location within said source code file (see

  for example, section 9.1.2 Simultaneous Editing Mode, lines 39-40,

  "The user is ready to enter the return type of the get method.", "copy-

  and-paste must be used");

- responsive to receiving said user command, automatically determining whether said second source code statement has been previously verified from said status of each respective source code statement (see for example, p.256, section 10.3, Unusual Matches Display, lines 18-22, "Each match is plotted as a small block"); and

- if said second source code statement has not been previously verified, automatically warning a user that said second source code statement is unverified (see for example, p.257, figure 10.4, and related text, "Strong outliers appear noticeably alone in this visualization").

Claim 7:

Miller discloses a method for developing source code for a computer program, comprising the steps of:

- generating a plurality of source code statements in a source code file, said source code file being compliable into object code of said computer program (see for example, p.228, figure 9.6, browser pane and related text, "java code");

- automatically maintaining a record of status of each respective source code statement)(p.166, section 7.3.4 "Scrollbar Augmentation", "To help the user keep track of multiple selections in a long document, the browser pane's scroll-bar is augmented with marks indicating where selections (copies) are located (figure 7.6)" and also see example figure 9.6, 9.7, 9,8 and 9.9 and related text)).

- receiving a user command to copy a first of said plurality of source
  code statements to a different location within said source code file to
  create a second source statement at said different location, said
  second source code statement being identical to said first source code
  statement, each of said first source code statement and said second
  source code statement being compilable together into said object code
  of said computer program (see for example, section 9.1.2
  Simultaneous Editing Mode, lines 39-40, "The user is ready to enter
  the return type of the get method.", "copy-and-paste must be used");

- responsive to receiving said user command, automatically determining
  whether said first source code statement has been previously verified
  from said status of each respective source code statement (see for
  example, p.256, section 10.3, Unusual Matches Display, lines 18-22,
  "Each match is plotted as a small block"); and

- if said first source code statement has not been previously verified,
  automatically performing at least one action in response to determining
  that said first source code statement is unverified (see for example,
  p.257, figure 10.4, and related text, "Strong outliers appear noticeably
  alone in this visualization").

Claim 8:

Miller further discloses the method for developing source code for a

computer program of claim 7, wherein said step of automatically

performing at least one action in response to determining that said first

source code statement is unverified comprises issuing a warning message

to a user (see for example, p.257, figure 10.4, and related text, "Strong

outliers appear noticeably alone in this visualization").

Claim 10:

Miller also discloses the method for developing source code for a

computer program of claim 7, wherein said step of automatically

determining whether said first source code statement has been previously

verified comprises automatically determining whether said first source

code statement has successfully completed some portion of a compilation

process for compiling source code into object code executable by a

computer system (see for example, p.256, lines 15-22, "the Unusual

Matches window", "Blocks near the left side of the window represent

typical matches...").

Claim 11:

Miller further discloses the method for developing source code for a

computer program of claim 7, wherein said status of each respective

source code statement comprises data indicating whether the respective

statement was copied from another source code statement (see for

example, p.238, section 9.2.2 Simultaneous Editing Algorithm, p.238, line

20-p.239, line 9, "record", "Feature generation", "Hypothesis generation",

"Update").

Claim 12:

Miller also discloses the method for developing source code for a

computer program of claim 11, wherein said step of automatically

determining whether said first source code statement has been verified

comprises automatically determining whether said first source code

statement was copied from another statement which has been previously

verified (see for example, p.238, section 9.2.2 simultaneous Editing

Algorithm, lines 30-21, "Hypothesis generation takes the positive

examples and the feature list and searches for a region set consistent with

the examples.").

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described
as set forth in section 102 of this title, if the differences between the subject matter sought to
be patented and the prior art are such that the subject matter as a whole would have been
obvious at the time the invention was made to a person having ordinary skill in the art to which
said subject matter pertains. Patentability shall not be negatived by the manner in which the
invention was made.

7.   Claims 13 and 15-18 are rejected under 35 U.S.C. 103(a) as being

unpatentable over <u>Miller</u> (Robert C. Miller, Lightweight Structure in Text,

May 2002)

Claims 13 and 15-18:

Claims 13 and 15-18 claim a computer program product for developing

source code for a computer program, which is the product version of the

method claims as discussed in claims 1 and 3-6 above respectively.

Therefore, these claims are obvious over <u>Miller</u>, because it is well known

in the computer art to practice and/or produce such a program product for

carrying out the acts/steps of such method by a typical computer.

Conclusion

8.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

9.   Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Zheng Wei whose telephone number is

(571) 270-1059 and Fax number is (571) 270-2059. The examiner can

normally be reached on Monday-Thursday 8:00-15:00.

        If attempts to reach the examiner by telephone are unsuccessful,

the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-

3695. The fax phone number for the organization where this application

or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature of relating to the status of this

application or proceeding should be directed to the TC 2100 Group

receptionist whose telephone number is 571- 272-1000.

Information regarding the status of an application may be obtained

from the Patent Application Information Retrieval (PAIR) system. Status

information for published applications may be obtained from either Private

PAIR or Public PAIR. Status information for unpublished applications is

available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on

access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from

a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-

1000.

TUAN DAM
SUPERVISORY PATENT EXAMINER